HEMOLYTIC UREMIC SYNDROME

See also: Enterohemorrhagic E. coli

DISEASE REPORTING

In Washington

New requirements for the reporting of hemolytic uremic syndrome (HUS) were instituted in December of 2000. In the first year of reporting, DOH received 3 case reports.

HUS is most commonly a complication of infection with *E. coli* O157:H7, but can occur following infection with non O157 *E. coli*, *Shigella*, and other bacterial pathogens.

Purpose of reporting and surveillance

- Because HUS is an important sequela of infection with *E. coli* O157:H7, surveillance for HUS may lead to the identification of *E coli* O157:H7 outbreaks in the community.
- To identify sources of transmission (e.g., a commercial product or public water supply) and to prevent further transmission from such sources.
- When the source is a risk for only a few individuals (e.g., an animal or a private meal), to inform those individuals how they can reduce their risk of exposure.
- To identify cases that may be a source of infection for others (for example, a food handler), and prevent further disease transmission.

Reporting requirements

- Health care providers: **immediately notifiable to Local Health Jurisdiction**
- Hospitals: **immediately notifiable to Local Health Jurisdiction**
- Laboratories: no requirements for reporting
- Local health jurisdictions: **immediately notifiable to DOH Communicable Disease Epidemiology: 1-877-539-4344**
-

CASE DEFINITION FOR SURVEILLANCE

Clinical criteria for diagnosis

Hemolytic uremic syndrome (HUS) is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Thrombotic thrombocytopenic purpura (TTP) also is characterized by these features but can include central nervous system (CNS) involvement and fever and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal).

Laboratory criteria for diagnosis

The following are both present at some time during the illness:

- Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear and
- Renal injury (acute onset) evidenced by hematuria, proteinuria, or elevated creatinine level (i.e., ≥ 1.0 mg/dL in a child aged <13 years or ≥ 1.5 mg/dL in a person aged ≥ 13 years, or ≥ 50% increase over baseline).

Note: A low platelet count can usually, but not always, be detected early in the illness, but it may then become normal or even high. If a platelet count obtained within 7 days after onset of the acute gastrointestinal illness is not <150,000/mm^3, other diagnoses should be considered.

Case definition

- Probable:
  - An acute illness diagnosed as HUS or TTP that meets the laboratory criteria in a patient who does not have a clear history of acute or bloody diarrhea in preceding 3 weeks or
  - An acute illness diagnosed as HUS or TTP, that a) has onset within 3 weeks after onset of an acute or bloody diarrhea and b) meets the laboratory criteria except that microangiopathic changes are not confirmed.
- Confirmed: an acute illness diagnosed as HUS or TTP that both meets the laboratory criteria and began within 3 weeks after onset of an episode of acute or bloody diarrhea.

A case should be reported as HUS when testing for shiga toxin producing *E. coli* is negative or not done. A case of HUS that also tests positive for shiga toxin producing *E. coli* should be reported as *E. coli*.

Some investigators consider HUS and TTP to be part of a continuum of disease. Therefore, criteria for diagnosing TTP on the basis of CNS involvement and fever are not provided because cases diagnosed clinically as postdiarrheal TTP also should meet the criteria for HUS. These cases are reported as postdiarrheal HUS.